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ANIMAL
ELECTRICITY.

Price—One Shilling.

ANIMAL ELECTRICITY;

OR,

OBSERVATIONS

ON

THE ORIGIN AND IDENTITY

OF THE

ELECTRIC AND GALVANIC FLUIDS;

WITH A

PRACTICAL REVIEW OF THE USE

OF THE

METALLIC CONDUCTORS.

By M. YATMAN, Esq.

MEMBER OF THE COMPANY OF APOTHECARIES.

" DE REBUS IPSIS, UTERE TUO JUDICIO "

The Second Edition, with Additions.

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TO

HENRY GRIMSTONE, Esq.

SIR,

HAVING THE PLEASURE TO BE A FELLOW LABOURER IN THE SAME FIELD WITH YOURSELF, I TAKE THE LIBERTY TO ADDRESS THE FOLLOWING OBSERVATIONS TO YOU, EARNESTLY HOPING THAT WE MAY BOTH ENJOY THE FRUITS OF OUR LABOURS, FOR THE PUBLIC WELFARE, AND THE RELIEF OF THE INDIGENT LAME AND BLIND.

I HAVE THE HONOR TO BE,

SIR,

WITH GREAT RESPECT AND ESTEEM,

YOUR FAITHFUL SERVANT,

MATTHEW YATMAN.

Lindsay Row,
Chelsea,
December, 1805.

PREFACE.

THE first edition of the following Work, having been printed in two separate books, the Author has thought proper to re-publish them together, as he has since acquired a great deal of additional matter. The Theories are taken from the most respectable Writers. He flatters himself, that the inferences he has drawn are natural and reasonable; and that they are supported by such facts, *as will convince the candid Philosopher of their utility. He has*

endeavoured to make himself intelligible, but he laments, that the pedantic affectation of obscure terms, at present used in Natural Philosophy and Chemistry, render that *extremely difficult.*

ANIMAL

ELECTRICITY,

&c. &c.

THE electric fluid is formed by a combination of the caloric, phlogistic, or inflammable principle of matter, (separated in the great field of nature, by fermentation, putrefaction, friction, collision, oxidation, &c.) with the oxigen or vital principle of air. It is the *anima mundi,* the vital spring in all animals and vegetables.

In and upon the earth this caloric or phlogistic principle, separated in vast quantities, by fermentation, putrefac-

tion, &c. is absorbed by the roots of vegetables, carried through them, perhaps, by capillary attraction, and, combining with the oxigen of the air, in their porous leaves, &c. imparts life, growth, and sensation to the vegetable tribe. The catchfly, the sensitive plant, and others, seem almost to possess animation.

In the stomachs of mankind and animals the component parts of the food are separated by digestion, and sent along the alimentary canal, from whence the nourishing part, with the caloric, is conveyed by the absorbent vessels, the lacteals, into the circulation of the blood, on its return to the heart, by the veins, through the lungs, where this caloric is oxided, or combines with the oxigen of the air in respiration; the blood thus purified is transmitted from the lungs to the heart, whence it is sent by the arteries, to renovate and nourish the whole animal. Part of this oxidated

blood is sent to the brain, which separates the *nervous influence, the animal electricity,* from it, which it disperses by the nerves, its conductors, over the whole body, communicating life, animation, muscular and vascular action, and energy to the whole system. If a nerve be divided, or tight bound, the part loses all sensation; pressure will occasion a numbness in a part for a time. The torpedo, according to the accurate Mr. J. Hunter's anatomical description of it, seems an exemplary proof of this theory of the nerves being the conductors, the electrical batteries in that animal being supplied with so very great a proportion of nerves.

The nervous fluid and animal electricity are now used as synonymous words by galvanists. By the terms oxided and oxidation is meant the combination of the caloric, phlogistic, or inflammable principle of any thing, with the oxigen of the air, forming the electric fluid.

The oxided blood of animals therefore is blood that has undergone this process in their lungs by respiration. The purer metals, as gold, silver, and platina, part with their caloric with difficulty, and are acted on only by particular acids; but zinc parts with its caloric even to water or the saliva of the mouth, if a purer metal, as gold or silver, be put in contact with it, so as to form an *electrical* circle with a conducting object.

In the electrical machines this caloric is separated by the friction of the glass on the amalgam of zinc and mercury, which, uniting with the oxigen of the air, forms the electric fluid.

In the galvanic troughs, &c. an acid is generally put with the water to the discs of the two metals, zinc and copper (or silver), by which the caloric of *the zinc only* is separated by the laws of chemical affinity; this, uniting with the oxigen of the air, forms the same elec-

trical fluid, and a Leyden phial may be charged with it from the trough.

When a quantity of electric fluid is contained in any body in a state of insulation, as an insulated luminous conductor, or a Leyden phial, or at a distance from any conducting object, as in a cloud, it is in an invisible, dormant state; but the moment a blunt conducting object comes within a proper distance, the electric fluid is discharged in a mass, and, combining with a proportional quantity of a third element, light, it forms a spark or flash of lightning, or electrical fire, which even from a Leyden phial will ignite spirits of wine.

If it meet with a sharp pointed metallic conductor, the electrical fluid is drawn off *in a stream of light* at a much greater distance, and gradually, as is proved, by buildings and ships being preserved by sharp pointed metallic conductors from the fatal effects of

lightning: and in the smaller experiment of discharging a Leyden phial, by a point applied to the ball thereof.

Darkness is said to be light in a quiescent state: strike a flint against a piece of steel in a dark room, the caloric of the steel is driven off by the collision; this uniting with the oxigen of the air, and a proportional quantity of particles of light, a flash of fire is formed sufficient to ignite gunpowder; so by rubbing two dry sticks together you may separate the caloric of the wood in such quantity that they will *take fire* in the vulgar phrase. This happens to carriages sometimes in travelling.

In passing the hand briskly, in contact, over the back of a cat, the caloric is discharged from the hair, and light is perceived and a snapping noise heard, in frosty weather particularly.

When a piece of silver is applied to

one surface of the tongue, and a piece of zinc to the opposite surface, as soon as the edges of the metals are brought into contact, or a third metal is applied to the edges of both, so as to form *a galvanic circle* with the tongue, the zinc is oxided by the saliva, and a peculiar saline, metallic taste is perceived on the tongue; but if one of these metals, the zinc, be put on the upper surface of the tongue, and the silver to the inside of the upper lip, where the ligament joins it to the upper gum, as soon as an electric circle is formed as above, a flash of light is perceived, *by the person performing the experiment only*, pretty strong, if the room be dark.

It is to be observed that, in this last experiment, a larger circle is formed between the two metals, including the *brain and optic nerves*.

Is not therefore this appearance of

light, *seen by the person who performs the experiment only,* a consequence of the percussion of the electric fluid (formed by oxidation of the zinc at the moment of contact with the silver or negative metal) on the optic nerves? as spasms are produced in a live flounder, by laying a plate of zinc and a piece of silver on the belly of the flounder, the moment they are brought into contact, or a communication is made between them by a third metal. If two pieces of silver are applied no spasms are observed. I have even seen strong spasms arise in a flounder some minutes after its entrails were drawn, by applying the zinc and silver as above.

It is well known that a blow on the eye will make it strike fire, or give this same appearance of light.

That electricity is an essential principle of the living animal, and the cause

of muscular motion, was *imagined* by the great and intuitive Newton, and others: it was afterwards proved by Galvani, who produced spasms in the leg of a live frog, by making a communication between a bare nerve and a muscle of the leg, by a simple conductor of electricity, a wire; similar to discharging an electrical phial by the same means, and almost proving a *plus* and *minus* of electrical matter between the nerve and the muscle.

Whence producing spasms, by the application of metals to the bodies of animals, or the contrary, of relieving them by the same means, with the different experiments and theories thence arising, have been called Galvanism; which word can surely only mean the discovery, or the production, of the electric fluid in animals, by the application of metals to their bodies.

" To produce this fluid by the application of *two different metals* to the bodies of animals, it is necessary that *one of them be easily oxidable.* The most striking circumstance in galvanism is, that it is always accompanied by *oxidation,* and is perhaps never produced without it; but oxidation is always going on in the bodies of animals, by the *respiration* and *the circulation of the blood.* We have reason to believe, that the oxigen received from the atmosphere, by the lungs, is the cause of animal heat, and probably of animal irritability; and it is not unreasonable to suppose, that *the nervous influence, or electricity,* may be separated *by the brain,* and *sent along the nerves* to stimulate the muscles" (and vascular system) " to action."—*Garnet's Zoonomia.*

Why is the oxigen of the air the cause of animal heat, &c.? By combining with the caloric of the blood in the

lungs, and producing this animal electricity, which stimulates the nerves and vascular system, and quickens the circulation.

The galvanists allow, that wherever the action of a part is increased, as in inflammation, pain, swelling, spasm, there the electricity of the part is increased also; and where the action of a part is decreased, as in œdematous swellings, dropsy, stagnant humours, mortification of parts, palsy, there the electricity of the part is *minus*.

" Humbolt asserts, that galvanism applied to animal bodies increases the vascular secretions; to prove which he applied a blister to himself, when it had risen he took off the cuticle or outward skin, and applied a piece of silver on one side and a piece of zinc to the other side of the blistered part; by *making a*

circle with a wire, connecting the two metals, he perceived *the discharge to be much increased.*"—*Wilkinson's Elements of Galvanism.*

Supposing these pieces of zinc and silver to be formed into two *sharp pointed conductors,* and *bound together,* forming, when applied to the body, a galvanic circle of *plus* and *minus,* is there any thing contrary to the laws of electricity or galvanism, in supposing (as in Mr. Humbolt's experiment of the blister) that they would stimulate the nervous and vascular system of a part, and increase its actions? or, that in case of inflammation, spasm, &c. *as metallic pointed conductors,* they might draw off a local *plus* of animal electricity, and thereby relieve swelling, pain, inflammation, spasm? I know a lady who scalded her finger, and by drawing the sharp points of a pair of scissars lightly, in contact, over the part, the

pain was at *first* greatly increased; but by continuing the operation, the pain and inflammation gradually ceased, and in about half an hour her finger was entirely cured. Another friend of mine cured an inflammation in his eyes, by drawing the points of a pair of compasses lightly, in contact, over the edges of the inflamed eyelids; but these simple metallic pointed conductors, *consisting of one metal only*, seem to act negatively, and therefore will not *always answer*, because *no oxidation* can take place so as to supply *the electrical fluid*, where that stimulus is wanted, as the following case will shew, of a

MORTIFIED CHILBLAIN.

Mrs. Mather, wife of Mr. Mather, a baker, in Milman's Row, Chelsea, in 1804, had a chilblain on her left foot, in a state of mortification; it succeeded a white swelling in the knee of the

same leg; the foot was swelled, the ulcer black, and so painful that she could not bear her foot to touch the ground; she had been applying ointments and poultices without any benefit. I desired the grease might be washed off, (that being a non-conductor,) and that she would let the Tractors, (pointed instruments made of a mixture of metals,) bound together, be drawn on each side the ulcer to the end of her toes, for half an hour that night. The next day she said, that while the tractors were drawn on her foot, and for an hour and a half afterwards, she was in *an agony of pain,* but that the *ulcer had discharged very much since,* and she felt herself better: I desired the operation might be repeated twice every day in the same manner. In a day or two I lent her a small pair of compasses, saying, perhaps they would do as well; she told me she felt *no pain or effect whatever* while

they were drawn on her foot, but that as soon as the Tractors were applied again the pain returned. By persevering in the use of them about *ten days in all,* the ulcer was entirely cured, and she walked as well as ever.

To the same stimulating effect of this positive electricity, or galvanism, I refer the following cures of palsy, dropsy, &c.

HEMIPLEGIA;

OR,

Palsy of one Side, with Mortification in the Leg.

Thomas Coombs, a soldier, now (May 1, 1804,) in the workhouse at Chelsea, has been afflicted with an hemiplegia, or palsy, on the left side for five years; his left arm hung down, entirely useless, numbed and cold; he could not move it of itself at all; he

dragged his left leg, *on the ground*, after him; he had been in *three* hospitals in London for the above complaint, and was discharged *from all* as *incurable*. For a long time back, more than a year, he has had a foul ulcer on the inside of his left leg, which was as *black as ink*; (his own expression) his leg was swelled as thick as his thigh, particularly about the ankle, where the skin hung over the shoe, all probably owing to the palsy of the nerves of that side, occasioning a stagnation of the humours in the vessels, at the most dependant part of the leg. About a fortnight since the knee of the same leg was very much swelled and inflamed, and looked as if another volcano of foul matter was going to break out there; the patella was very much inflamed, and entirely surrounded by a circle of matter. George Farr (in gratitude for the benefit he received at the Institution, for his contracted fingers) applied the tractors daily under

my inspection. Coombs told me, that on Wednesday night, May 2, the ulcer discharged, he believed, a pint in the night; in about a fortnight the ulcer was nearly well, the swelling of the leg much reduced, the skin put on an healthy appearance, the flesh grew firm, and he walked *stoutly on that leg* without *dragging it at all.* His arm in that *short time* was so much better that he could lift it *by itself* to his head, and give a hearty squeeze with his lately paralytic hand.

The tractors were drawn first from his forehead, backwards over his head, down the spine of his neck, the inside of his shoulder and arm, to the fingers ends, every day; and likewise from above the knee down the leg to the end of his toes: but finding himself so much better, perhaps fearful, if he got *quite well,* he should lose the benefit of

the house, *for his own reasons,* he would not use the tractors any more.

PALSY IN THE ARM,
AND
CONTRACTED FINGERS.

Mary Scott, aged about 60, in the same work-house, had a palsy in the arm, and contractions in her fingers, for *eleven years,* so as to disable her from work, and she became a burthen to the parish; George Farr drew the tractors over her head, as in the above case, and down her arm, for about a fortnight, by which she has recovered the use of her arm, hand, and fingers, so far as to make a shift for the matron of the house; and in about a month she was so entirely cured, by continuing the use of the tractors, that she was made a nurse to the house, June 1804, where she has remained well ever since.

In consideration of the above cures, and some others, the churchwardens bought a pair of tractors for the use of the house, and in gratitude made a present to the Institution established for the relief of the diseased poor, by these instruments.

Colonel Robson of Sloane Square, had a contraction in two fingers of his left hand for three years, his fingers were so tightly drawn to the palm, that he could not force them above an inch from it, and that gave him great pain up the arm, and even to his eye. He bought a pair of tractors on Tuesday, May 1803; I advised him to draw the points of them down the inside of his arm, and to his fingers ends, half an hour twice a day. On the Saturday following I saw him again, when he stretched out his arm to me, saying, "look, I can open my fingers now of

themselves, as far back as you can yours." There were some hard lumps on the tendons, which, by persevering a little while longer in the use of the tractors, all went away, except one, and that gives him no pain, and he has remained well ever since. He has the liberality to wish his case may be published, with his name to it.

A DROPSY OF THE CHEST.

John Anford, a working Glover, in Ormond Yard, Holborn, in 1804, had for several months an *Hydro-thorax*, or Dropsy in his Chest, for which, by the advice of a medical man, he had taken medicines, without benefit; this disorder being generally reckoned incurable. I gave him a letter to the Institution for the relief of the poor by these instruments. The tractors were then drawn over his chest, in all directions,

downwards to his pelvis, or hips, for half an hour; this produced a great discharge of urine, which continued at times the whole day, and he felt his breath much relieved. By continuing the use of the tractors, every day, the same discharge continued, but began to decrease daily, as the complaint lessened, till, in the course of a month, he found himself entirely cured, and he has continued well.

ASCITES,
OR
DROPSY OF THE ABDOMEN.

A woman 30 years of age, had an *Ascites,* or Dropsy of the Abdomen: she drew the tractors, from her stomach to her feet, for half an hour; she perceived her *legs to swell,* and she felt her breathing relieved; continuing the use of the tractors daily, in about a fortnight

she found a great quantity of water *ooze through the pores of the skin of her legs,* which in the course of a month began gradually to decrease, so as, *at last,* only to leave a damp on her stockings at night, and she found herself completely cured.

Both these cases arose merely from a relaxation, or loss of tone, in the arterial and absorbent vessels of the different parts, *not from diseased viscera,* and both were cured by means of this *topical galvanic stimulus,* restoring the natural tone to *the absorbent vessels,* whereby the water was again taken up, and carried off, by the kidneys, in one instance; in the other, it was deposited in the legs, and brought through the pores of the skin, like a perspiration—Can the cause and effect of *any medicine,* (the powers whereof I have the highest opinion) be more rationally accounted for?

Messrs. Herholdt and Rafn, in their Observations on the Tractors, published at Copenhagen, observe that inflammation and pain were often translated from their *original seat,* to the part of a limb, &c. *where they ceased drawing the tractors.* A relation of mine, a child, had an ulcer behind its ear; the mother drew the tractors from the ear to the middle of its arm; the ear was soon well, but the humour was translated to the part of the arm where she ceased drawing the tractors.

A young woman servant to a friend of mine at Chelsea, had for several years been troubled with chilblains, which had broken and left hard lumps on her feet. In 1803, they returned, and were on the point of breaking; she used the tractors three or four days, the chilblains were cured, and the lumps disappeared. In 1804, her chilblains returned; I lent her a pair of tractors which she used

several days, without the least benefit.— I observed the *points* of those tractors were worn *very blunt* and *round;* I lent her a pair that were *sharp pointed,* and they cured her in three days; I filed the others *sharp,* and *those* were the tractors used in the cure of the mortified chilblain above stated. This shews on what *niceties,* the success of these instruments depends, as well as on what *principles* they act. It is highly necessary likewise to observe, that they should be drawn *from the head, stomach,* and what are called the *nobler parts, downwards,* even to the extremity of the limbs, for fear of translation in some cases, as *gout,* &c. like medicines, they require patience and perseverance, sometimes. In common electricty, it is well known, the sharper the point of a metallic conductor is, the stronger is its effect, and the greater the distance it will *act* at. *This idea* put me upon examining the cause why those blunt

tractors had not the *usual good effect*, and the result shewed that I was right.

As a medical man, I joined in the cry against the tractors, but I believe no man has been more satisfactorily rewarded, for *relinquishing a prejudice*, than I have.

Seeing the names of some respectable medical men to cures performed by these instruments; I bought a pair in 1801. Sometime afterwards, a dear friend was seized with an inflammation in her left eye, for which I gave her an eye-water; the next morning the eyelids were inflamed, and swelled, with that blistering appearance which denotes Erysipelas; I sent for an Apothecary who gave her medicines; in the evening the disorder spread to the other eye; a blister was put on the back of her neck; it rose very well; but the third morning her eyelids were so much

swelled, that her eyes were both completely closed, with a great deal of fever and head-ache attending; (a medical friend had lately died on the 5th day of Erysipelas in his head;) I sent for a Physician of eminence, he ordered leeches to her temples, and medicines; the leeches drew very well; the next day the Doctor came, and she was much worse; he ordered a repetition of the draughts; on the fifth morning she was still worse; the doctor ordered the same draughts only. In the evening, every symptom encreasing, and dreading delirium and the worst consequences, almost in despair, I for the first *time in my life*, drew the tractors across both her eye-lids, down the side of her face, neck, the inside of her shoulder, and arm to the fingers ends; she said she felt a warmth follow the points the whole way; continuing about half an hour, to my astonishment, and joy, she said her head-ache was gone! the next

morning she said she was better, but she thought I had drawn the tractors wrong—this proves she felt *an effect.*—I supposed that drawing the tractors across *both* her inflamed eyes might increase the pain, I therefore drew them over each eye separately, and down each arm for about a quarter of an hour each; the relief she felt was extraordinary, and proved to me that there was *something material in their effects;* continuing their use two days more, she was so much better, that I discharged the Physician; continuing about ten days more, she recovered her sight, and was in every respect well, though her sight eontinued weak for some time. This lady sometime afterwards sprained her wrist so violently that a swelling the size of a pidgeon's egg rose on one of the tendons at the wrist, it was so painful she could not bear any thing to touch it; she drew the tractors *lightly over it,* for half an hour, the swelling

and pain were relieved a good deal; in about a month, she could bear to bind a piece of lead upon it; continuing the tractors about six weeks, it was entirely cured.—A medical man in the neighbourhood has *worn* one of these lumps on his wrist above ten years to my knowledge. A word to the *wise.*

INFLAMED EYE-LIDS
AND
SPECKS ON THE EYES.

(1803.)

Sarah Elliott, a poor girl, aged about 12 years, had the small pox about *nine years ago,* which left an inflammation in her eye-lids, and a speck before the pupil of each eye, ever since; and caused such an obstruction in her sight, that lately she had at times been scarce able to find her way about the house. She was at the Rev. Mr. Marshal's, then in Danvers-street, Chelsea. By Mrs. M's

desire I gavé her a letter to the Institution, where, by the daily use of the tractors, *for three months,* the inflammation of the eye-lids was cured, and the speck before the pupils *so entirely removed,* that she could see to read, and was sent to service in London.

Elizabeth Turner, of No. 12, Robinson's Lane, Chelsea, aged 25, in May 1804, from a fall at four years old, had a complaint in her hip, which gave her much pain, till she was fourteen *years old;* since which time she has had an ulcer in her thigh, which has discharged more or less at times; about six weeks since the discharge of the ulcer stopped, and it inflamed with excessive pain; she could not rest—she lost her appetite, so as scarcely to eat any thing for two weeks, and she looked as if she was going off in a rapid decline. I lent her a pair of tractors, which her mother drew gently over the part, and

down the leg; they at first occasioned a very *great increase of pain, while using*, and such a sense of weight on the part, as if a heavy waggon (her own expression) was going over it, and white streaks followed the points of the tractors, although the mother declares she drew them as lightly as possible. In a day or two the pain and sense of weight, *while they were using*, went off, and *the ulcer discharged most copiously;* continuing their use more than a fortnight the inflammation and pain went off: the discharge from the ulcer gradually decreased; she has recovered her appetite, she looks well; she has resumed her usual employment, and returned the tractors almost with tears of gratitude. Nov. 8th, 1805, I met her accidentally, walking, and she told me she had continued well ever since.

A child had its face and head almost covered with a foul eruption, the trac-

tors were drawn from the face, backwards over the head and down the back, this produced *a great discharge of matter*, which entirely relieved the child, in a very short time.

Wilkinson, in his elements of Galvanism, observed, that both Electricity and Galvanism have been found serviceable in paralytic and other fatal disorders; but that the *wrong kind*, may do much harm. The most *interested*, and therefore the most *inveterate* opponents of these instruments have never charged them with doing any harm; and it is nearly impossible they should, from *the principle on which they act*, if they are properly applied; at the same time the portability of them, and the ease with which they may be applied *at any time*, (even in bed, without exposing the patient to the action of the cold air,) is a great comfort and convenience peculiar to them.

The assertion that they act "*by the imagination,*" is too absurd to require a serious reply; as it is equally applicable to the effect of *every medicine* that is swallowed, or otherwise applied, as well as to the effects of Electricity and Galvanism. It has raised a *grin* against the tractors which *has had its run,* but the voice of truth and reason, founded upon *established theory,* and supported by long-continued practical experience, must prevail against malicious, *interested* prejudice, founded on *ignorance* and *falsehood;* and the liberal, candid philosopher, and friend of humanity, will see that, *as metallic pointed conductors,* they are as rational a *topical assistant branch* of the healing art, as a blister, electricity or any other external application.

Most of the cures here subjoined, have been wrought under my inspection, on the principle of restoring the

equilibrium of Animal Electricity. On what other, can the electrical machine, or the galvanic apparatus, be applied? Are not all medicines, of *any power*, to be reduced to the *tonic, relaxant, stimulant,* or *sedative* classes?

Gratitude, and a sense of duty, have alone urged this address to the Public; the only interest *I can have,* is, in seeing others reap that benefit, which I have experienced above these four years in my own family, as well as among my friends, and the poor at the Institution, where they have proved eyes to the blind, and feet to the lame.

James's Powder was as *violently opposed,* by certain *interested persons,* but it is now generally sold, and used under the name of Antimonial Powder of Dr. James.

" Some physicians have such an aversion to every composition, the materials of which are kept secret, that they will in no case order them, they imagine such condescension beneath the dignity of the profession: their dislike is well founded in general; but I cannot help thinking there *may* be particular cases in which there is more wisdom *in the breach than the observance* of this general rule; and as for *the dignity of the profession, its chief dignity* certainly consists in curing diseases in the speediest way possible.

" In cases where the usual practice generally fails, or, in which a medicine, whose composition is kept secret, has the reputation of acting with more efficacy than the known prescriptions; or even when the patient or his friends have a strong desire to try a particular medicine, which we know has been used in a thousand instances, with

safety; in any of those cases, obstinately to oppose the trial, merely because we do not know the precise ingredients of which it is composed, would, according to my judgment, be unreasonable. For let it be remembered, that although we have not a certain knowledge of the particular ingredients of the medicine in question, yet we have a knowledge of its manner of operating and its usual effect; this is the most material knowledge a physician can have. What more in reality does he know of Jesuit's Bark, Rhubarb, or any other uncompounded medicine? The first is a medicine, consisting of two or three ingredients, secretly mixed together by a physician of the name of James. The other two are medicines, whose component parts are still more secretly, and in a manner still less understood, combined and mixed together by nature. If then he prescribe the latter from a knowledge

of *their effects only* he ought not to reject all trial of the former, merely because he is unacquainted with the particulars of its combination.

" No body can approve less than I do of the practice of keeping any prescription secret which can be of public utility; but I cannot think that the inventors not acting in the most liberal manner possible, is a good reason for preventing a patient's reaping the benefit of the invention."—*Moore's Medical Sketches, page 37.*

FINIS.

NOTE.

The Institution above mentioned, for the relief of the indigent, labouring under various topical disorders in the eyes and other parts, is now at No. 2, Glasshouse Street, Golden Square.

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